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09/928,553	08/13/2001	Paul Augustinus Peter Kaufholz	NL 000433	7134

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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 09/928,553

Filing Date: August 13, 2001

Appellant(s): KAUFHOLZ, PAUL AUGUSTINUS PETER

Mr. William S. Francos
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 6/20/2006 appealing from the Office action mailed 1/20/2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

5,761,638	KNITTLE et al	6-1998
6,505,057	FINN et al	1-2003
6,839,670	STAMMLER et al	1-2005

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1, 5-8, and 12-17 stand finally rejected under 35 U.S.C. § 103 (a) as being unpatentable over Finn et al (*U.S. Patent: 6,505,057*) in view of Stammler et al (*U.S. Patent: 6,839,670*). This rejection was set forth in a prior office action, mailed on 1/20/2006.

Claims 2-4 and 9-11 stand finally rejected under 35 U.S.C. § 103 (a) as being unpatentable over Finn et al (*U.S. Patent: 6,505,057*) in view of Stammler et al (*U.S. Patent: 6,839,670*) and further in view of Knittle et al (*U.S. Patent: 5,761,638*). This rejection was set forth in a prior office action, mailed on 1/20/2006.

(10) Response to Argument

The applicant traverses the prior art rejection of independent claims 1, 8, and 15 on the basis that Finn et al in view of Stammler et al fails to disclose the combining of cancelled entities for overall non-recognition by the system (*Appeal Brief, Pages 6-10*). Before addressing the applicant's specific points of the aforementioned argument, the examiner will provide a summary of the Finn and Stammler references as applied to claims 1, 8, and 15.

Overview of the prior art as applied to the independent claims:

With respect to Claims 1, 8, and 15, Finn recites a method and system wherein multiple input devices (microphones, Fig. 9a, Elements 20, 26, 28, and 40) each include an individual automatic echo canceling (AEC) facility (*AEC 11,11; 12,12; 21,21; and 22,22, Fig. 9a*) (*first and second near and far end microphones and corresponding AEC facilities, Col. 16, Line 1- Col. 18, Line 6*). Finn further recites that echo cancelled signals from each of the individual microphones are added (*combined*) at echo cancellation summers (*Fig. 9a, Elements 162 A, B; 172 A, B; and Col. 16, Line 1- Col. 18, Line 6*). These summed echo cancelled signals are further combined at a voice communication device input (telephone steering switch, Col. 16, Lines 35-39; Col. 17, Lines 6-10; Col. 17, Lines 37-41; Col. 18, Lines 2-6; and Fig. 9a, Element 80A), thus creating an overall echo-cancelled input that is forwarded to a voice communication device (*cellular telephone, Col. 18, Lines 7-16*). These particular features taught by

Finn correspond to the claimed plurality of devices each including an echo canceling facility (*microphones and associated AECs, as previously noted*), driving each echo canceling facility to combine each facility's functional ability for canceling a mutually unique cancelable speech entity (*echo cancellation summers as previously noted*), and combining the cancelled entities for overall non-recognition by the system (*combining echo cancelled signals from each microphone at a voice communication device, as previously noted*).

The method and system taught by Finn is similar to the claimed invention with the exception that each device does not include a speech recognizing facility. It is worth pointing out, however that Finn does note the desirability of implementing his echo canceling method and system in a speech recognition system (*Col. 3, Lines 17-23*). Stammler, however does disclose the use of speech recognizers with individual input devices of a system, which includes audio (CD, tape deck, etc.) and video (monitor) devices (*Col. 19, Lines 23-67*). Stammler further notes the ability to implement an echo canceller (echo subtraction) in the system (*Col. 7, Lines 34-39*).

Adding the speech recognizing facilities for individual devices, as taught by Stammler, to the summed echo cancellers for each individual device as taught by Finn would result in an echo cancellation method and system in which a device input means (microphone) accepts a speech signal, each AEC cancels an echo signal, and the cancelled signals are combined at summers and at a voice input device (*speech recognizers which would be used combination with the voice communication device (cellular phone) taught by Finn because Stammler teaches speech control of cellular*

phones and/or a plurality of other devices, Col. 19, Lines 23-67). This combination would produce an overall cancelled signal and result in an overall non-recognition because the echo signals from each device would be removed (cancelled) and incapable of being recognized at the speech recognizers taught by Stammier because the cancelled signals would be non-speech. The benefit of such a combination is provided the Stammier reference, which notes that the use of speech recognizers enables convenient, hands-free device control (*Col. 2, Lines 19-24*). Also, Finn notes that the use of his echo cancellation can improve speech recognition performance (*Col. 3, Lines 17-23*), thus providing a further reason for combining the teachings of the prior art.

Claim 15 recites a similar system to that noted in claim 8, with the addition of the limitation regarding speech input/output means interposed between speech recognizing and echo canceling facilities, for intercoupling another speech-enhanced device. This additional limitation is taught by a combination of the Finn and Stammier references. As applied to Claims 1 and 8, Finn recites multiple speech inputs (*microphones, as previously noted*) and outputs (*speakers, Fig. 9a, Elements 24, 26, 42, and 44*) between a plurality AEC facilities and summers (as previously noted), while Stammier recites the use of any number of input devices having speech recognition facilities (*Col. 19, Lines 22-67*). Thus, the combination of the multiple speech inputs and outputs between a plurality of AECs and echo cancellation summers as taught by Finn with the ability to use echo cancellers along with speech recognizers and add any number of speech controlled devices to a speech control system as taught by Stammier (*radio, navigation*

system, CD changer, etc., Col. 19, Lines 25-40), yields the aforementioned claim limitation. The Finn and Stammer references provide the motivation for such a combination for the same reasons noted with respect to Claims 1 and 8.

Response to the applicant's arguments:

Returning to the applicant's specific arguments, the applicant first argues that the Office Action does not cite specifically the disclosure in Finn of the combining of the cancelled entities for overall non-recognition by the system (*Appeal Brief, Page 7*). In response, the examiner points out that in the prior Office Action, the specific pertinent portions of the Finn reference were provided that clearly indicate the combination of AEC facility outputs at summers and a voice communication device, which results in a combined cancelled echo signal for overall non-recognition by the system (*i.e., non-processed or non-recognized*) (*Final OA from 1/20/2006, Pages 5-6*). It was also explicitly noted that Finn did suggest, but not specifically teach combining AECs with speech recognizers (*i.e. the means that would not recognize the cancelled signal taught by Finn for overall non-recognition because a cancelled echo signal is not speech*), but that such a teaching was provided by the Stammer reference. The benefit of implementing such a combination was also provided (*Final OA from 1/20/2006, Page 6*). In addition, the examiner notes that in the Final Office Action from 1/20/2006, further explanation was provided pertaining to the aforementioned rejection (*Final OA from 1/20/2006, Pages 2-3*).

The examiner points out that the portion of the MPEP cited by the applicant (*MPEP 706*) as rendering the rejection of the independent claims improper is merely a suggestion of an examining procedure, and thus, would not qualify a prior art rejection as being improper. Nonetheless, the examiner notes that the specific pertinent portions of the references have been clearly indicated in the Office Action from 1/20/2006 for the above given reasons.

The applicant next argues that the cited portion of Finn does not disclose speech recognizing facilities and echo canceling facilities for avoiding the recognizing of speech output from the system as user speech or the combining of cancelled entities for non-recognition by the system (*Appeal Brief, Pages 7-8*). In response, the examiner points out that such limitations are not provided by the Finn reference individually, but rather by the combination of the teachings of Finn and Stammier. As previously noted, Finn discloses the use of multiple AECs for multiple speech inputs that cancel non-user speech (*first and second near and far end microphones and corresponding AEC facilities, Col. 16, Line 1- Col. 18, Line 6*). Finn further recites that echo cancelled signals from each of the individual microphones are added (*combined*) at echo cancellation summers (*Fig. 9a, Elements 162 A, B; 172 A, B; and Col. 16, Line 1- Col. 18, Line 6*). These summed echo cancelled signals are further combined at a voice communication device input (telephone steering switch, Col. 16, Lines 35-39; Col. 17, Lines 6-10; Col. 17, Lines 37-41; Col. 18, Lines 2-6; and Fig. 9a, Element 80A), thus creating an overall echo-cancelled input that is forwarded to a voice communication

device (*cellular telephone, Col. 18, Lines 7-16*). Thus, Finn teaches combining AECs for overall non-processing at a voice communication device, but does not explicitly disclose that the voice communication device has a speech recognizer. Stammler, however does disclose the use of speech recognizers with an echo canceller (echo subtraction) (*Col. 7, Lines 34-39 and Col. 19, Lines 23-67*).

Adding the speech recognizing facilities for individual devices as taught by Stammler to the summed echo cancellers for each individual device as taught by Finn would result in an echo cancellation method and system in which a device input means (microphone) accepts a speech signal, cancels an echo signal at each AEC, and sums the cancelled signals at summers and at a voice input device (*speech recognizers in the case of Stammler*). These canceled signals would not be non-speech that would not be recognized by the speech recognizers taught by Stammler and thus yield overall non-recognition by the system

Thus, it is the combination of the teachings of Finn and Stammler that teaches the aforementioned claim limitation.

Also, the applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

With respect to Claim 15, the applicant argues that the prior Office action and Finn et al fail to point out or teach a speech input/output means intercoupling another

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speech-enhanced device (Appeal Brief, Page 8). In response, the examiner notes that claim 15 contains essentially the same subject matter as claims 1 and 8, and thus, the pertinent passages of the prior art references pointed out in the rejection of Claims 1 and 8 were referred to in the rejection of claim 15 (*Final OA from 1/20/2006*). For a more detailed explanation of the rejection, see the overview of the prior art as applied to claim 15. Also, the applicant's arguments fail to comply with 37 CFR 1.111(b) because they amount to a general allegation that the claims define a patentable invention without specifically pointing out how the language of the claims patentably distinguishes them from the references.

The applicant argues that the Office Action fails to provide the necessary motivation to combine references, fails to provide evidence supporting such motivation, and relies on extrinsic evidence (*Appeal Brief, Pages 8-9*). In response, the examiner notes that the motivation for combining the prior art of record is not derived from extrinsic evidence, but rather provided by the references themselves, in accordance with MPEP 2142. Specifically, Stammler notes that the use of speech recognizers enables convenient, hands-free device control (*Col. 2, Lines 19-24*), while Finn recites that the use of echo cancellation can improve speech recognition performance (*Col. 3, Lines 17-23*). Thus, Stammler and Finn each provide motivation for combining the prior art of record and extrinsic evidence is not relied upon. The examiner also notes that the motivation provided by the prior art of record was explicitly pointed out in the advisory action form 3/31/2006.

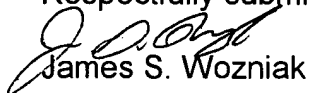
The dependent claims are argued as further limiting rejected parent claims (*Appeal Brief, Page 10*). Since the independent claims remain rejected for the reasons noted above, the dependent claims also remain rejected for at least the same reasons.

(11) Related Proceeding(s) Appendix



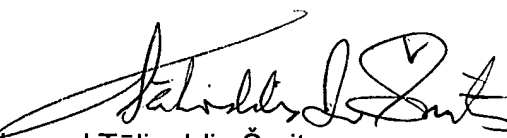
No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,


James S. Wozniak

Conferees:

  
James S. Wozniak, David Hudspeth, and Tāļivaldis Šmits


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